

New Era of Networks

A Sybase Company

Installation Guide

**Adapter for SAP R/3
Version 3.9**

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Contents

About This Book	v	
CHAPTER 1	Migrating to Adapter for SAP R/3 Version 3.9	1
	Process Overview	1
	Preparing for Upgrade.....	2
	Upgrading from Version 3.0.3 to Version 3.9	2
	Upgrading from Version 3.8 to Version 3.9	3
	Changes to Configuration Keys	3
	Converting IDoc Formats	5
	Example Log File.....	11
	Adjusting for Customization.....	11
	Suggestions for Converting IDocs.....	11
	Example Conversion Tool Configuration File.....	12
	Converting BAPI Formats	14
	Upgrading Rules	15
CHAPTER 2	Installing Adapter for SAP R/3	17
	Preparation.....	17
	Integration Server Support	18
	Transport Support	18
	Supported Platforms and Compilers	19
	Installation Environment	20
	Disk Space and Memory Requirements.....	23
	Required Software	23
	Running Executables Before Installing the Adapter on Windows ..	24
	Preparing the Installation Environment	24
	Previous versions	24
	CIMRepository.....	25
	Temporary Installation Directory	26
	Installing Adapter for SAP R/3	26
	Understanding Environment Variables.....	32

CHAPTER 3	Uninstalling Adapter for SAP R/3.....	33
	Starting the Repository.....	33
	Uninstalling Adapter for SAP R/3 3.9	34
	Uninstalling Shared Components.....	34
Index		37

About This Book

Audience

The primary user of this document is the system administrator who is responsible for the installation and configuration of the server used for New Era of Networks Adapter for SAP R/3 (Adapter for SAP R/3).

How to use this book

This document describes how to install Adapter for SAP R/3. These instructions provide information for both a new and an upgrade installation. For a concurrent installation, contact technical support.

The guide is organized into the following chapters:

- “About This Book” provides documentation, technical support, and product education information.
- Chapter 1, “Migrating to Adapter for SAP R/3 Version 3.9” provides information to prepare for an upgrade installation.
- Chapter 2, “Installing Adapter for SAP R/3” provides steps to prepare for and run an adapter installation.
- Chapter 3, “Uninstalling Adapter for SAP R/3” provides the steps for uninstalling the product from the server.

Related documents

This section describes the available documentation for Adapter for SAP R/3.

Cross-Platform Documentation The following documentation comprises the Adapter for SAP R/3 documentation set:

- *User’s Guide*
- *Feature Guide*
- *Installation Guide*

Related Documentation The following open transport documents and sample configuration files are referenced in this document set to supply you with specific information that supports this product:

- *File Driver Configuration Guide*, release 2.6
- *MQ Series Driver Configuration Guide*, release 2.6
- *MSMQ Driver Configuration Guide*, release 2.6

-
- *JMS Driver Configuration Guide*, release 2.6.1
 - *Tibco Driver Configuration Guide*, release 2.6.1

Other related documentation is available from New Era of Networks and Sybase. Refer to documentation from each of these companies for more detail about use of applications relevant to this product.

Other sources of information

Use the Sybase Technical Library CD and the Technical Library Product Manuals web site to learn more about your product:

- The Technical Library CD contains product manuals and is included with your software. The DynaText reader (included on the Technical Library CD) allows you to access technical information about your product in an easy-to-use format.

Refer to the *Technical Library Installation Guide* in your documentation package for instructions on installing and starting the Technical Library.

- The Technical Library Product Manuals web site is an HTML version of the Technical Library CD that you can access using a standard web browser. In addition to product manuals, you will find links to EBFs/Updates, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

To access the Technical Library Product Manuals web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

Sybase EBFs and software updates

❖ Finding the latest information on EBFs and software updates

- 1 Point your web browser to the Sybase Support Page at <http://www.sybase.com/support>.
- 2 Select EBFs/Updates. Enter user name and password information, if prompted (for existing web accounts) or create a new account (a free service).
- 3 Select a product.
- 4 Specify a time frame and click Go.
- 5 Click the Info icon to display the EBF/Update report, or click the product description to download the software.

❖ **Creating a personalized view of the Sybase web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase web pages.

- 1 Point your web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click MySybase and create a MySybase profile.

Conventions

The formatting conventions used in this manual are:

Formatting example	To indicate
command names and method names	When used in descriptive text, this font indicates keywords such as: <ul style="list-style-type: none"> • Command names used in descriptive text • C++ and Java method or class names used in descriptive text • Java package names used in descriptive text
<i>myCounter</i> variable <i>Server.log</i> <i>myfile.txt</i> <i>User Guide</i>	Italic font indicates: <ul style="list-style-type: none"> • Program variables • Parts of input text that must be substituted • Directory and file names. • Book titles
<i>sybase\bin</i>	A backward slash (“\”) indicates cross-platform directory information. A forward slash (“/”) applies to information specific only to UNIX. Directory names appearing in text display in lowercase unless the system is case sensitive.
“About This Book”	References to chapter titles have initial caps and are enclosed within quotation marks.
File > Save	Menu names and menu items are displayed in plain text. The angle bracket indicates how to navigate menu selections, such as from the File menu to the Save option.
parse put get Name Address	The vertical bar indicates: <ul style="list-style-type: none"> • Options available within code • Delimiter within message examples
create table table created	Monospace font indicates: <ul style="list-style-type: none"> • Information that you enter on a command line or as program text. • Example output fragments

Formatting example	To indicate
Type the <i>Name</i> of the attribute. Click <i>Apply</i> .	GUI field or button name that is the recipient of a procedural action.

If you need help

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.

For more information on Support Services, education, and consulting services, refer to the *Customer Services Reference Guide*.

Migrating to Adapter for SAP R/3 Version 3.9

This chapter explains how to migrate data from an existing database used with a previous version of Adapter for SAP R/3 to a target database.

Topic	Page
Process Overview	1
Preparing for Upgrade	3
Changes to Configuration Keys	3
Upgrading from Version 3.0.3 to Version 3.9	2
Upgrading from Version 3.8 to Version 3.9	3
Converting IDoc Formats	5
Converting BAPI Formats	14
Upgrading Rules	15

Process Overview

For Windows, Solaris, AIX, and HP-UX, the following procedures comprise the migration process:

- Transferring configuration information from the old configuration files to the new configuration files using Table 1-1 as a guide for key mapping.
- Running the IDoc format conversion tool (if applicable)
- Loading BAPI formats using the 3.9 adapter and map fields

Preparing for Upgrade

Note Existing database refers to the database you are currently using.

Target database refers to the database you will use with Adapter for SAP R/3 version 3.9.

Before migrating formats and rules from an existing database to your target database, verify the following:

- Existing database contains valid rules and formats.
- Integration Server is installed.
- Target database and temporary database are instantiated, contain no data, and allows sufficient space for rules and formats.
- Adapter for SAP R/3 version 3.9 is installed.

Warning! When upgrading formats and rules to a target database, you must have three separate database instances: your existing database, a temporary database, and your target database. Do not attempt to rebuild your current database after exporting all the data.

Upgrading from Version 3.0.3 to Version 3.9

Upgrading from Adapter for SAP R/3 version 3.0.3 to version 3.9 consists of the following steps:

- Transfer user-specific configuration information from the version 3.0.3 configuration files to version 3.9 configuration files.

You can do this manually using the sample configuration files in the SAP-3_9/CFG folder or using the GUI. See “Changes to Configuration Keys” on page 3 for a table of changes to configuration keys between versions.

- Reload BAPI formats using Adapter for SAP R/3 version 3.9. You must create new rules for these formats.
- Migrate IDoc formats using the procedure described in “Converting IDoc Formats” on page 5.

Upgrading from Version 3.8 to Version 3.9

Upgrading from Adapter for SAP R/3 version 3.8 to version 3.9 consists of the following steps:

- Transfer user-specific configuration information from the version 3.8 configuration files to version 3.9 configuration files.

You can do this manually using the sample configuration files in the SAP-3_9/CFG folder or using the GUI. See “Changes to Configuration Keys” on page 3 for a table of changes to configuration keys between versions.

- BAPI formats have not changed between versions 3.8 and 3.9. You can continue to use the BAPI formats you used with version 3.8.
- Migrate IDoc formats using the procedure described in “Converting IDoc Formats” on page 5.

Changes to Configuration Keys

If you use the GUI to import your pre-3.9 configuration files, some of the keys will be automatically mapped to the keys required by 3.9. You will have to make some manual changes to the configuration file before you use it. Alternatively, you can make all changes manually.

Note Appendix A of the *Adapter for SAP R/3 User’s Guide* contains a list of all currently valid configuration keys.

The following keys and values must be changed in your configuration files. You can use the sample configuration files that are provided with the new installation. Manually transfer existing values for keys from your existing configuration files into the new configuration files based on the sample files provided.

This list contains keys that are typically used in configuration files but may not be all of the keys you have used. See the *Adapter for SAP R/3 User’s Guide* for a specific version for a complete list of configuration keys for that version.

Table 1-1: Product Upgrade Keys and Mapping

Version 3.0.3	Version 3.8	Version 3.9
queue.mgr.name	NNMQS_SES_OPEN_QMGR	same as 3.8

Version 3.0.3	Version 3.8	Version 3.9
queue.in.name=TO_SAP	NNOT_TIL_OPEN_TSI=TO_SAP	same as 3.8
queue.out.name=FROM_SAP	NNOT_TIL_OPEN_TSI=FROM_SAP	same as 3.8
failurequeue.name=FAILURE	NNOT_TIL_OPEN_TSI=FAILURE	same as 3.8
queue.empty_queue_wait_time_milli	transport.wait_time_milli	not used
queue.empty_queue_wait_time	transport.wait_time	same as 3.8
queue.exit_it_empty	transport.exit_if_empty	same as 3.8
error.logfile	no equivalent key Default error log is NNSYMessageLog.nml	same as 3.8
no.special.char	no equivalent key	same as 3.8
sap.reconnectAttempts	sap.retry.count and sap.retry interval	same as 3.8
sap.rfc.destination	same as 3.0.3	sap.destination
sap.client	same as 3.0.3	same as 3.0.3
sap.user	same as 3.0.3	same as 3.0.3
sap.password	same as 3.0.3	same as 3.0.3
sap.language	same as 3.0.3	same as 3.0.3
sap.rfc.trace	same as 3.0.3	sap.trace
sap.logLevel	same as 3.0.3	same as 3.0.3
sap.logFile	same as 3.0.3	same as 3.0.3
Adapter.adapter	same key but value has changed	same as 3.8
NN.LinkMode	same as 3.0.3	sap.linkMode
NN.InboundMethod	same as 3.0.3	sap.inboundMethod
NN.IDocBatchSize	same as 3.0.3	Adapter.batch.size
NN.CreateIDocReport	same as 3.0.3	sap.createIDocReport
NN.IDocTrace	same as 3.0.3	not used
NN.LogFileName	same as 3.0.3	sap.logFile
NN.VerboseLog	same as 3.0.3	sap.verboseLog
MQS.QueueManagerName	NNMQS_SES_OPEN_QMGR	same as 3.8
MQS.GetQueueName	NNOT_TIL_OPEN_TSI	same as 3.8
MQS.PutQueueName	NNOT_TIL_OPEN_TSI	same as 3.8
MQS.ErrorQueueName	NNOT_TIL_OPEN_TSI	same as 3.8
RFC.Destination	same as 3.0.3	sap.destination

Version 3.0.3	Version 3.8	Version 3.9
RFC.ClientCode	same as 3.0.3	sap.client
RFC.UserName	same as 3.0.3	sap.user
RFC.Password	same as 3.0.3	sap.password
RFC.Language	same as 3.0.3	sap.language
RFC.Trace	same as 3.0.3	sap.trace
no equivalent key	RFC.ReqWait	sap.reqWait
no equivalent key	RFC.ConnectRetries	sap.connectRetries
no equivalent key	NN.retry.count	sap.retry.count
no equivalent key	NN.retry.interval	sap.retry.interval
no equivalent key	SAP.reqWait	sap.reqWait
no equivalent key	SAP.Destination.Out	sap.destination.out
no equivalent key	SAP.Destination.In	sap.destination.in
no equivalent key	SAP.retry.count	sap.retry.count
no equivalent key	SAP.retry.interval	sap.retry.interval

Converting IDoc Formats

You must convert the formats for both IDocs and BAPIs when you move between versions of Adapter for SAP R/3. Custom formats can continue to use names that begin with unique prefixes to differentiate them from standard formats.

You need to migrate your IDoc formats to accommodate the following situations:

- SAP has modified an IDoc structure.
Even if you made no changes to the adapter, this could happen when you moved to a new version of SAP.
- You have modified an IDoc structure.
You must convert your modified IDocs when you upgrade to a new version of the adapter or a new version of SAP.
- You are migrating from version 3.0.3 to version 3.9 of the Adapter for SAP R/3.

The format conversion tool that ships with Adapter for SAP R/3 is a valuable resource for you to more easily migrate IDoc formats. Formats are dependent on the field mapping that you have done so you must also migrate those mappings. The purpose of the conversion tool is to preserve the field mappings used for output formats and transfer those current field mapping to the newly loaded format. The tool does this using two format export files as input to produce a new format export file; the new format export file combines the information from the two formats. This is intended to save you time because, after you use the tool to transfer you old field mappings, you need map only the new fields. Formats can be converted without doing rules at the same time, but rules cannot be converted without also converting the associated formats.

To use the IDoc conversion tool, export your old IDoc output format and the new unmapped output format loaded using the version 3.9 adapter. Then edit the conversion tool configuration file to specify the names of the format export files and run the tool. IDoc formats required by version 3.9 into the IDoc conversion tool. The tool then creates one usable format based on the mapping of the two formats.

After you have transferred the field mapping, you may validate the converted format by reformatting previously used messages and confirming that the output message fields contain the expected data. The New Era of Networks utility programs msgstest.exe and ruletest.exe can be used to validate your converted messages and rules.

The IDoc conversion tool for Adapter for SAP R/3 provides the tools to do the following:

- Migrate IDoc formats from a 4.x Formatter database (database used by Adapter for SAP R/3 version 3.0.3) to a 5.4 Formatter database (database used by Adapter for SAP R/3 version 3.8).
- Update an extended IDoc format to a 5.6 Formatter database.
- Update a currently used IDoc format in a 5.x Formatter database to a newer version.

If you are currently using map objects with formats for either of the last two scenarios, the conversion tool is not necessary because map objects preserve the field mapping from the original format. Map objects are available only with New Era of Networks formatters.

Note The following procedures must be applied individually to each IDoc format that is being migrated. The conversion tool is able to handle only one IDoc type at a time.

❖ To migrate IDoc formats from a 4.x Formatter database

Output formats used by the Broker for IDocs sent into SAP changed between version 3.03 and version 3.8 of the SAP adapter. The segment names used to begin with E2 or Z2 and terminate with a three-digit version number. Segment names now begin with E1 or Z1 to reflect that the IDoc is inbound into SAP. Three-digit version numbers have been dropped.

Note New input formats can be used as loaded. No information from the old input format needs to be migrated.

1 Do one or both of the following:

- a Export only the outbound format from the 4.x Formatter database using the NNFie utility provided with Formatter 4.x.

Example:

```
C:\MQI\bin>nnfie -e absen1.oc.4x.exp -m
SAP.OC.ABSEN1 -s nnfie
```

- b Export the Rules associated with the format using the NNRie utility, if you are converting rules.

Example:

```
C:\MQI\bin.>nnrie -e absen1.4x.rules.exp -m
SAP.OC.ABSEN1 -s nnfie
```

Note When exporting extended IDoc formats from an 4.x Formatter database, the format name must be in quotation marks because names contain special characters. For example:

```
nnfie -e format.exp -m "SAP.OC.MATMAS03^1" -s import
```

- 2 Load the outbound format for the same IDoc into a temporary 5.6 database using version 3.9 of Adapter for SAP R/3.
- 3 Export only the outbound format of the IDoc loaded in the previous step using the NNFie utility provided with Formatter 5.x.

Example:

```
C:\sybase\bin>nnfie -e absen1.oc.5x.exp -m
SAP.OC.ABSEN1 -s nnfie
```

- 4 Edit the configuration file for the conversion tool to indicate:

- The names of the two format export files created in step 1 and step 3 of this procedure.
 - The name that you want to use for the converted format. (This name is arbitrary).
- 5 To run the conversion tool, type the command using the following as an example:
- ```
sap39idoccnvtool -file=<name of configuration file>
```
- The format export files and the configuration file used to load the 3.9 schema should be placed in the SAP-3\_9/bin folder. The command must be run from this same folder.
- 6 Inspect the log file produced by the conversion utility for errors.
- 7 Do one of the following:
- a Import the format created by the conversion utility into the target database using the NNFie utility provided with Formatter 5.x.  
Example:  

```
C:\ConversionTests\>nnfie -i absen1.oc.conv.exp
-g -s nnfie
```
  - b Import the Rules file created by the conversion utility using the NNRie utility provided with Formatter 5.x. This step is required only if step 1b was used.
- 8 Review the formats to be sure the converted format has the correct mapping.  
If any formats have not been converted, you must change them manually.
- 9 Test the format by using it as the target format for reformatting a test message.
- ❖ **To update a newly extended IDoc format in a 5.x Formatter database:**
- 1 Export only the original outbound format using the NNFie utility provided with Formatter 5.x.  
Example:  

```
C:\sybase\bin>nnfie -e absen1.oc.5x.exp -m
SAP.OC.ABSEN1 -s nnfie
```



- 2 Load the outbound format for the newly extended IDoc into a temporary 5.6 database using the 3.9 SAP adapter. (The example assumes an extended IDoc named ZABSEN1 was made from the base IDoc ABSEN1.)
- 3 Export only the outbound format of the IDoc loaded in the previous step using the NNFie utility provided with Formatter 5.x.

Example:

```
C:\sybase\bin>nnfie -e zabsen1.oc.5x.exp -m
SAP.OC.ZABSEN1 -s nnfie
```

- 4 Edit the configuration file for the conversion tool to indicate:
  - The names of the two format export files created in step 1 and step 3 of this procedure.
  - The name that you want to use for the converted format. (This name is arbitrary.)
- 5 To run the conversion tool, type the command using the following as an example:

```
sap39idoccnvtool -file=<name of config file>
```

The format export files and the configuration file used to load the 3.9 schema should be placed in the SAP-3\_9/bin folder. The command must be run from this same folder.

- 6 Inspect the log file produced by the conversion utility for errors.
- 7 Import the format created by the conversion utility into the target database using the NNFie utility provided with Formatter 5.x.

Example:

```
C:\ConversionTests\>nnfie -i zabsen1.oc.conv.exp -g
-s nnfie
```

- 8 Test the format by using it as the target format for reformatting a test message.

---

**Note** The way extended IDocs are treated is the major consideration for the conversion process between Adapter for SAP R/3 versions 3.8 and 3.9. Extended IDocs are no longer considered special situations.

---

❖ **To update a currently used IDoc format in a 5.x Formatter database:**

- 1 Export only the original outbound format using the NNFile utility provided with Formatter 5.x.

Example:

```
C:\sybase\bin>nnfie -e absen1.oc.5x.exp -m
SAP.OC.ABSEN1 -s nnfie
```

- 2 Load the outbound format for the new version of the IDoc into a temporary 5.6 database using the 3.9 SAP adapter (the example assumes a new version of ABSEN was released - ABSEN2).
- 3 Export only the outbound format of the IDoc loaded in the previous step using the NNFile utility provided Formatter 5.x.

Example:

```
C:\sybase\bin>nnfie -e absen2.oc.5x.exp -m
SAP.OC.ABSEN2 -s nnfie
```

- 4 Edit the configuration file for the conversion tool to indicate:
  - The names of the two format export files created in step 1 and step 3 of this procedure.
  - The name that you want to use for the converted format. (This name is arbitrary.)
- 5 To run the conversion tool, type the command using the following:

Example:

```
sap39idoccnvtool -file=<name of config file>
```

The format export files and the configuration file used to load the 3.9 schema should be placed in the SAP-3\_9/bin folder. The command must be run from this same folder.

- 6 Inspect the log file produced by the conversion utility for errors.
- 7 Import the format created by the conversion utility into the target database using the NNFile utility provided with Formatter 5.x.

Example:

```
C:\ConversionTests\>nnfie -i absen2.oc.conv.exp -g -
s nnfie
```

- 8 Test the format by using it as the target format for reformatting a test message.

## Example Log File

```
Source Control Record: SAP.OF.ABSEN1.CR
Destination Control Record: SAP.OF.ABSEN1.CR
```

```
Source Segment Name: SAP.OF.E2ABSE1
Destination Segment Name: SAP.OF.E2ABSE1
```

```
Field: SAP.E2ABSE1.BDEGROutMap: InMap: LEG.F1
Field: SAP.E2ABSE1.MOABWOutMap: InMap: LEG.F2
Field: SAP.E2ABSE1.ZEITYOutMap: InMap: LEG.F3
Field: SAP.E2ABSE1.AGRUNOutMap: InMap: LEG.F4
Field: SAP.E2ABSE1.BEGDAOutMap: InMap: LEG.F5
Field: SAP.E2ABSE1.ENDDAOutMap: InMap: LEG.F6
Field: SAP.E2ABSE1.ATEXTOutMap: InMap: LEG.F7
```

## Adjusting for Customization

Make sure that the new format contains the correct default values for control records. (Default values in control records are optional.) The conversion tool transfers user-defined values and mappings, but it does not transfer default values.

---

**Note** If the original format specified default values for the partner profile fields of the control record, then you must manually set the values to those literals. This applies to the literals named `SAP.<IDOC TYPE>.*` where `*` is one of the following: `RCVPOR`, `RCVPRN`, `RCVPRT`, `SNDPOR`, `SNDPRN`, `SNDPRT`.

---

## Suggestions for Converting IDocs

- Use descriptive names for the format export files.
- `NNFie` for 4.x uses the `sqlsvses.cfg` file, `NNFie` for 5.x uses the `NNFie.cfg` in the local directory (if one was created) or it searches for a copy of `nnsyreg.dat` file. The example commands assume the session name is `nnfie`.
- Use the `which` command to be sure that the expected version of `nnfie.exe` is being referenced.

- The conversion tool can only convert one format at a time, so each export file must contain only one top-level format. (For example, SAP.OC.DEBMAS04)
- The easiest way to provide the information necessary for a user to log into the SAP system is to use a functioning configuration file for the inbound IDoc process. The value of SAPIInConfig key should be the name of this file. (For example, the Schema mode configuration file used to load the IDoc with Version 3.9. It should be in the SAP-3\_9/bin folder.)
- The saprfc.ini file is required. The file is in the location pointed to by the RFC\_INI environment variable.
- The log file created by running the conversion tool reports errors and conversion information. The conversion information is a summary of error messages and a list of items that have been converted. It should indicate that some field mappings were preserved; for example, see the log file at the end of this section (sample log for a run of the conversion tool that preserves mappings).
- The import of the format generated by the conversion tool should use the -g option to ignore the conflicts that are reported when the same components are loaded in multiple converted format files. For example, the Input/Output Control “SAP.Length.3” or the control for some other length value may exist in multiple format definitions. The definitions are identical, so there is no need to reload the component. The NNFile.log reports instances that were ignored.

## Example Conversion Tool Configuration File

```
#-----

File Name: ConvTool.cfg
Sample configuration file for running the IDoc
format conversion tool.
The format of this file is important. Session names
MUST begin at the beginning of the line, the
associated keys MUST be below the session name
and indented by spaces or tabs. Comments are
preceded by #.

#-----
NNConv

name of original format as seen in formatter
```

```

database
 FromFormat = SAP.OC.MATMAS03^1

name of format (loaded using new version of SAP
adapter) as seen in 5x formatter
 ToFormat = SAP.OC.MATMAS03.ZMATMAS_EXTENSION

must provide connection parameters used by 3.9 SAP
adapter to connect to SAP use inbound idoc or Schema
mode configuration file to get needed params to
connect to SAP
 SAPInConfig = in.cfg

1=411 0=5x (they could go 5x to 5x)
 SourceFrom411 = 1

release of user's SAP system
 SourceSAPRelease = 4.6B

name of export file of format to convert (ONLY one
format!)
 SourceExtract = matmas_ext.4x.mapped.exp

name of export file of format freshly loaded in 5.x
via GUI (ONLY one format!)
RawExtract = matmas_ext.39.raw.exp
desired name of converted format export file
OutputExtract = matmas_ext.39.conv.exp
conversion log file
 LogFile = format_conversion.log
#####
the following keys are for Rules related components
#####
name of rule export file (from 411) [Optional]
RulesIn = matmas_ext.rules.4x.exp
desired name of converted rule export file (into 5x)
[Optional]
RulesOut = matmas_ext.rules.conv
User may specify a new name for Message Type within the
Application Group in 5x database (the name is no
longer limited to 32 characters in length, but may be
up to 128 characters in length).
After the input format is imported into the 5x
database, the user would need to manually rename the
format to match the new expanded name created using
this key.

```

```
example:
name in 4x database: LEG.I.ORIGINAL_LIMITED_SIZE_NAME
renamed in 5x database to
LEG.I.MODIFIED_FORMAT_NAME_OF_LARGER_SIZE
ToRuleInputMessage=SAP.IC.MATMAS03.ZMATMAS_EXTENSION
defaults to same name [Optional] or change rule name
RuleNameOut =

eof
```

## Converting BAPI Formats

You must convert the formats for both IDocs and BAPIs when you move between versions of Adapter for SAP R/3. Custom formats can continue to use names that begin with user-defined prefixes to differentiate them from standard formats.

BAPI formats and rules that you used for version 3.8 of the adapter will work with Adapter for SAP R/3 version 3.9. BAPI formats from version 3.0.3 or earlier are not supported and should be reloaded using the version 3.9 adapter. New rules must be created for these formats.

The term New Formatter Database references any database created using MQSI version 2.0.2, WMQI version 2.1, or e-Biz Integrator versions 3.2x or 3.6x.

The term Old Formatter Database references a database built on earlier versions of these products.

### ❖ To use BAPI formats used in pre-3.9 versions

- Reload all BAPIs into the New Formatter Database.

---

**Note** New Rules must be created for all formats that are reloaded into a new database.

---

## Upgrading Rules

Review the rules that you are currently using with Adapter for SAP R/3. If they need to be converted for use with version 3.9:

- For converting IDoc rules, see “Converting IDoc Formats” on page 5.
- For converting BAPI rules used with 3.0.3 formats, manually convert your rules.





# Installing Adapter for SAP R/3

This chapter describes how to prepare for and run an installation on a Windows NT, Windows 2000, Solaris, AIX, or HP-UX server.

| Topic                                                        | Page |
|--------------------------------------------------------------|------|
| Preparation                                                  | 17   |
| Disk Space and Memory Requirements                           | 23   |
| Required Software                                            | 23   |
| Running Executables Before Installing the Adapter on Windows | 24   |
| Preparing the Installation Environment                       | 24   |
| Installing Adapter for SAP R/3                               | 26   |
| Understanding Environment Variables                          | 32   |

---

**Note** Review the printed *Release Bulletin* included with this package for last-minute updates to this *Installation Guide*.

---

## Preparation

This section describes the areas you must consider before you run the installation procedure.

- Integration Server Support
- Transport Support
- Platform and Compiler Support
- Disk Space and Memory Requirements
- Required Software
- Installation Environment

## Integration Server Support

Adapter for SAP R/3, version 3.9, supports the following integration servers:

- e-Biz Integrator, version 3.6
- MQSeries Integrator, version 2.0.2
- WebSphere MQ Integrator, version 2.1

---

**Note** MQSeries Integrator version 2.0.2 does not support multi-byte data.

---

## Settings for Integration Servers

The following combinations of integration server, OT driver, schema loader, and serializer can be used with Adapter for SAP R/3, version 3.9.

**Table 2-1: Settings for Integration Servers**

| Integration Server     | Open Transport Driver                | Schema Loader       | Serializer                       |
|------------------------|--------------------------------------|---------------------|----------------------------------|
| MQSI 2.0.2<br>WMQI 2.1 | MQSeries                             | NNT56 Schema Loader | NCF Serializer<br>XML Serializer |
| e-Biz Integrator 3.6   | EMQ<br>MQSeries<br>MSMQ<br>Flat File | NNT56 Schema Loader | NCF Serializer<br>XML Serializer |

## Transport Support

Adapter for SAP R/3, version 3.9, uses Open Transport (OT). Open Transport supports the following transport drivers:

**Table 2-2: Server transport support**

| <b>Driver</b> | <b>Version</b> | <b>Supported Platforms</b> |
|---------------|----------------|----------------------------|
| Flat File     | 2.6            | NT, Solaris, HP-UX, AIX    |
| MQSeries      | 2.6            | NT, Solaris, HP-UX, AIX    |
| MSMQ          | 2.6            | NT                         |
| Tibco         | 2.6.1          | NT                         |
| JMS           | 2.6.1          | NT, Solaris                |

## Supported Platforms and Compilers

“Supported Platforms and Compilers” on page 19 identifies the operating systems and compilers required for this product. Use this table to identify the software required for installation.

**Table 2-3: Server**

| <b>Operating System</b>                                                                   | <b>DBMS</b>                                                                                                                                                | <b>Compiler</b>                           |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Windows NT 4.0 (Service Pack 6a or higher)<br><br>Windows 2000 (Service Pack 2 or higher) | Sybase ASE 12<br>Sybase ASE 12.5<br>Microsoft SQL Server 2000<br>Microsoft SQL Server 7<br>Oracle 8i r3 (8.1.7)<br>Oracle 9i<br>DB2 UDB 7.1<br>DB2 UDB 7.2 | Microsoft Visual C++, version 6.0         |
| Solaris 8                                                                                 | Sybase ASE 12<br>Sybase ASE 12.5<br>Oracle 8i r3 (8.1.7)<br>Oracle 9i<br>DB2 UDB 7.1<br>DB2 UDB 7.2                                                        | SparcWorks C++, version 6.0, update 1     |
| HP-UX 11.00                                                                               | Sybase ASE 12<br>Sybase ASE 12.5<br>Oracle 8i r3 (8.1.7)<br>Oracle 9i<br>DB2 UDB 7.1<br>DB2 UDB 7.2                                                        | HPaC++, version A.03.15                   |
| AIX 4.3.3                                                                                 | Sybase ASE 12<br>Sybase ASE 12.5<br>Oracle 8i r3 (8.1.7)<br>Oracle 9i<br>DB2 UDB 7.1<br>DB2 UDB 7.2                                                        | VisualAge C++, Professional version 5.0.2 |

## Installation Environment

### Previous Releases

If you have a previous version of New Era of Networks Adapter for SAP R/3 installed, it is suggested that you uninstall that version before installing the current release. However, if you plan to continue to use your older version of

the software, it can remain on the same server. Installation of the current release does not overwrite the previous installation and does not affect any files you might have added.

## **CIM Repository**

The CIM (common information model) repository shares installation information across Sybase and New Era of Networks products, tracking version and path information for each product installation. If the repository is already installed, you do not need to install a new CIM Repository. However, the repository must be running before you can install products.

If a CIM repository does exist:

- on the local machine on which you are installing, and the repository is running, the installer uses that repository by default. The Repository Information window does not appear.
- on the local machine on which you are installing and the repository is not running, the installer tries to start the existing repository. If it cannot start the repository, a warning message appears stating that a repository was found but could not be started. The Repository window will appear for you to provide the repository information and start the repository.
- on a remote machine, the Repository Information window appears even if the repository is running on the remote machine. If you want to use an existing repository, start it manually and provide the information required by the installer for the existing repository.

If a CIM repository does not exist or cannot be found by the installer, a window appears, prompting you to install a new CIM Repository or use an existing repository.

❖ **To start a repository**

If the repository is already installed, you must provide the server, port number, and user information for the existing repository. The system populates the screen with default values for the server, port number, and user information, but you can modify the values if necessary.

- Use platform specific commands to start the repository:

- a On Windows, enter the following:

```
cd <install_dir>\CIMRepository-3_0_0\bin
repository.bat
```

- b On UNIX, enter the following:

```
cd <install_dir>/CIMRepository-3_0_0/bin
./repository.sh
```

## Temporary Installation Directory

The installer uses a temporary location during the installation process. The default temporary location on Windows is defined in the system environment variables and is usually set to C:\temp. The default temporary location on UNIX is /var/tmp.

If enough space is not available in the default temporary location, the installer might not start, or it might start, but notify you that sufficient space is not available. Either case requires providing sufficient space in the temporary directory. You can do one of the following:

- Move or delete files to provide space on the default temporary directory.
- Launch the installer using a different temporary directory.

❖ **To install on a temporary directory other than the default directory:**

- Use platform specific commands to specify an install directory:

- a On Windows, enter the following:

```
setup -is:tempdir <full path to alternate temp
directory>
```

- b On UNIX, enter the following:

```
setup -is:tempdir <full path to alternate temp
directory>
```

**Note** Do not use spaces or special characters in your UNIX path.

## Disk Space and Memory Requirements

|            |                                                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Disk space | NT: 183 MB for adapter and temporary directory used during installation<br>UNIX: 208 MB for adapter and 160 MB for temporary directory |
| Memory     | 256 MB for product files                                                                                                               |

## Required Software

“Supported Platforms and Compilers” on page 19 identifies the operating systems and compilers required for this product. Use this table to identify the software required for installation.

The following must be installed or configured on the server before installing the adapter:

- Windows operating system
- SAP R/3, version 3.1H or higher; 4.0B or higher to work with XML formats.
- DBMS server database application.
- Compiler if you plan to write any of your own code.
- One of the integration servers listed in “Integration Server Support” on page 18.
- Internet Explorer version 5.5, Service Pack 2.

## Running Executables Before Installing the Adapter on Windows

You must run the following executables or .msi files from the Adapter for SAP R/3 Server CD before you install the Adapter for SAP R/3 on Windows.

- From your CD-ROM drive, open the vbruntime-6\_0 folder and double-click on vbrun60sp4.exe to install Visual Basic runtime. This is used by the GUI. When the install is finished, click OK.
- From your CD-ROM drive, open the mmc-1\_2 folder and double-click on immc2.exe to install the Microsoft Management Console, which is used by the GUI. When the install is finished, click OK.
- From your CD-ROM drive, open the mdac-2\_6 folder and double-click on the mdac\_typ.exe file to install the proper version of MDAC. When the install is finished, click OK.
- For Windows NT, from your CD-ROM driver, open the msvc-6\_0 folder and double-click on the vcredist.exe file to install the proper version of MSVC runtime. When the install is finished, click OK.

After you have completed installing these four applications, you can continue with the next steps to complete the install.

---

**Note** If you are installing Adapter for SAP R/3 on the same machine as your database server, you may not have to install a separate database client; instead, you can connect directly to the database server.

---

## Preparing the Installation Environment

### Previous versions

If you have a previous version of Adapter for SAP R/3 installed, it is suggested that you uninstall that version before installing the current version. However, if you plan to continue to use your older version of the software, it can remain on the same server. Installation of the current version does not overwrite the previous installation and does not affect any files you may have added.



## CIMRepository

The Common Information Model (CIM) Repository shares installation information across Sybase and New Era of Networks products, tracking version and path information for each product installation. If the repository is already installed, it is not necessary to install a new CIM Repository. However, the repository must be running before you can install products. After the installation has been completed, you can stop the CIM Repository to save resources.

If a CIM Repository does exist:

- on the local machine and is running, the installer uses that repository by default. The Repository Information window does not appear.
- on the local machine and is not running, the installer tries to start the existing repository. If it cannot start the repository, a warning message appears stating that a repository was found but could not be started. The Repository Information window appears and you can provide the repository information and start the repository.
- on a remote machine, the Repository Information window appears even if the repository on the remote machine is running. To use an existing repository, start it manually and provide the information required by the installer for the existing repository as detailed in “To start a repository” on page 25.

If a CIM Repository does not exist or cannot be found by the installer, a window displays with the prompt to either install a new CIM Repository or use an existing repository.

### ❖ To start a repository

If the repository is already installed, you must provide the server, port number, and user information for the existing repository. The system populates the screen with default values for the server, port number, and user information but you can modify the values if necessary.

- 1 To start the repository on Windows, enter the following:

```
cd <install dir>\CIMRepository-3_0_0\bin
repository.bat
```

- 2 To start the repository on UNIX, enter the following:

```
cd <install dir>/CIMRepository-3_0_0/bin
./repository.sh
```

## Temporary Installation Directory

The installer uses a temporary location during the installation process. The default temporary location on Windows is defined in the system environment variables and is usually set to C:\temp. The default temporary location on UNIX is /var/tmp.

If enough space is not available in the default temporary location, the installer may not start or may start but notify you that sufficient space is not available. You can do one of the following:

- Move or delete files to provide space.
- Launch the installer using a temporary directory on a different drive (Windows) or location (UNIX).

❖ **To install on a temporary directory other than the default directory:**

1 For Windows, enter the following:

```
setup -is:tempdir <full path to alternate temp directory>
```

2 For Unix, enter the following:

```
./setup -is:tempdir <full path to alternate temp directory>
```

---

**Note** Do not use spaces or special characters in your UNIX path.

---

## Installing Adapter for SAP R/3

For all installation instructions, <install dir> refers to the default installation directory.

- If installing on Windows, the default is C:\Sybase.
- If installing on Unix, the default is /user/u/Sybase. When installing on Unix, do not use spaces or special characters in the path.

If the installation directory does not exist, you can either create the directory or the installer will create the installation directory when installation begins. If you get a memory error while installing, see “Temporary Installation Directory” on page 26.

---

**Note** Before you begin the installation, the repository must be running unless you plan to install a new one. If you plan to use an existing repository, you can verify whether the repository is running by doing one of the following:

On Windows, go to Task Manager > Processes. If `dbsrv7.exe` is listed as running, the repository is active.

On Unix, type `ps -ef | grep dbsrv7`

---

❖ **To install Adapter for SAP R/3 using the InstallShield Wizard:**

These installation instructions assume you are logged onto the server with administrative rights/user permissions. When installing on UNIX, it is best to perform the install directly on the target machine in the Common Desktop Environment (CDE) single window mode. Use the CD-ROM to install Adapter for SAP R/3.

1 Insert the CD-ROM and go to the step for your operating system:

2 Start the installer.

a *On Windows NT and 2000*

1 Verify that you have installed all prerequisite software.

2 Select *Start>Run* from the Windows Start menu.

3 In the Run dialog box, browse to locate the setup file:

`<CD-ROM drive>:\setup.exe`

4 Click *OK*.

The Installer Welcome window appears.

5 Got to step 3 of the main procedure.

b *On Solaris:*

1 Mount the CD-ROM.

For example:

`pf_s_mount <CD DEVICE> /mnt_point`

2 Set the IP address:

```
export DISPLAY=<IP address:0.0>
```

- 3 To change to the /mnt\_point directory, enter:

```
%cd mnt_point
```

- 4 To start the installer, enter:

```
%./setup
```

The Installer Welcome window appears.

- 5 Got to step 3 of the main procedure.

c *On AIX:*

- 1 Mount the CD-ROM.

For example:

```
pfs_mount <CD DEVICE> /mnt_point
```

- 2 Set the IP address:

```
export DISPLAY=<IP address:0.0>
```

- 3 To change to the /mnt\_point directory, enter:

```
%cd mnt_point
```

- 4 To start the installer, enter:

```
%./setup
```

The Installer Welcome window appears.

- 5 Got to step 3 of the main procedure.

d *On HP-UX:*

- 1 Mount the CD-ROM.

Some of the files that are being installed might have names longer than 31 characters or have mixed-case file and directory names, so you must enter the following mount commands:

```
nohup pfs_mountd &
nohup pfsd &
pfs_mount <cd device> /mnt_point
```

- 2 Set the IP address:

```
export DISPLAY=<IP address:0.0>
```

- 3 To change to the /mnt\_point directory, enter:

```
%cd mnt_point
```

- 4 To start the installer, enter:

```
%. /setup
```

The Installer Welcome window appears.

- 5 Got to step 3 of the main procedure.
- 3 To initiate the installation process, click *Next* on the Installer Welcome window.

The Installer window appears.

- 4 To specify an installation directory, choose one of the following:
  - a To accept the default directory, click *Next*.
  - b To use a different directory, click *Browse*, select the directory, and click *Next*.

---

**Note** For optimum performance, install all Sybase and New Era of Network products into the same directory.

---

- 5 To configure the repository, do one of the following:
  - a If your repository is running, the Select Products To Install window appears. Go to step 7.
  - b If you do not have a repository installed or it is installed on a remote machine, the Repository Information window appears. Go to step 6.

---

**Note**

You can verify whether the repository is running by doing one of the following:

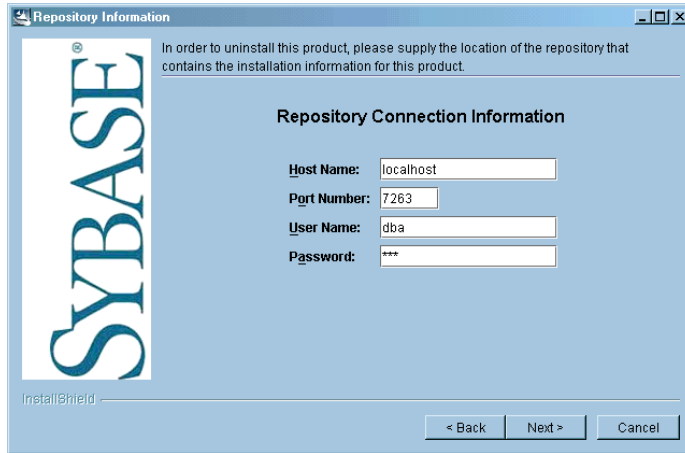
On Windows, go to Task Manager > Processes. If *dbsrv7.exe* is listed as running, the repository is active.

On Unix, type `ps -ef | grep dbsrv7`

---

- 6 In the Repository Information window, do one of the following:
  - To install a new repository, go to step 6a.
  - To use an existing repository, go to step 6b.

**Figure 2-1: Repository Information**



- a To install a new repository, based on requirements detailed in “CIMRepository” on page 25:
  - 1 Choose *Install a new repository*.

The Repository Connection Information is not visible in the Repository Information window.
  - 2 Click *Next*.

The Repository Installation window displays the repository components to be installed.
  - 3 Click *Next*.

The Repository Installation window displays the progress of the installation. Installation of a new repository may take a few minutes.

When the repository installation is complete, the Select Products To Install window appears.
- b If the CIM Repository is already installed and the Repository Information window appears:
  - 1 Choose *Use an existing repository*.

- 2 Accept the defaults for Repository Connection Information if possible. The defaults are shown in Figure 2-1 on page 30.

---

**Note** If you use an existing repository, the repository *must* be running to continue the installation.

---

- 3 Click *Next*.

The Select Products to Install window appears.

- 7 From the Select Products to Install window, accept the default settings and click *Next*.

The Installation Summary window appears displaying the products that will be installed and the approximate disk space that they will take.

- 8 Click *OK*.

The Installation Summary window displays the progress of the installation.

- 9 Click *Finish* when the following message appears:

```
The InstallShield Wizard has successfully installed
New Era of Networks Adapter for SAP 3.9.
```

---

**Note** If you get a NULL error message at the end of the installation, ignore the message.

If you are installing on Solaris 7, you might receive error messages when finishing the installation. The product installed correctly; you can ignore the errors.

---

- 10 For Windows, reboot the machine.

Adapter for SAP R/3 and the Sybase shared components are located in the user specified installation directory *<install dir>*. The Adapter for SAP R/3 software is located in *<install dir>\SAP-3\_9*.

**Table 2-4: /<install dir>/SAP-3\_9**

| <b>Subdirectory</b> | <b>Description</b>                                            |
|---------------------|---------------------------------------------------------------|
| /bin                | contains wrapper scripts for executables and shared libraries |
| /CFG                | contains sample configuration files                           |
| /NNSYCatalogues     | contains ctg message and error files                          |
| /share              | contains data files                                           |

## Understanding Environment Variables

Required environment variables are set by wrapper scripts at runtime. The GUI executable installation defines system environment variables of SAP39\_ROOT and CGC39\_ROOT with a value of <install dir> and the variable RFC\_INI with a value of <install dir>\CFG\saprfc.ini. Complete configuration information is supplied in *Adapter for SAP R/3 User's Guide* and should be used after verifying the installation and before using Adapter for SAP R/3.



# Uninstalling Adapter for SAP R/3

This chapter explains how to uninstall Adapter for SAP R/3 version 3.9. To uninstall Adapter for SAP R/3 version 3.8, use the installer that was provided with that version. Call Sybase Technical Support for instructions on uninstalling a version earlier than 3.8.

| Topic                                | Page |
|--------------------------------------|------|
| Starting the Repository              | 33   |
| Uninstalling Adapter for SAP R/3 3.9 | 34   |
| Uninstalling Shared Components       | 34   |

## Starting the Repository

The CIM repository that shares Sybase and New Era of Networks product information must be running to uninstall products. This ensures the repository is updated with the accurate list of installed products. Using other means to uninstall products does not update the repository, which becomes an issue during reinstallation.

To start the repository on Windows, enter the following:

```
cd <install dir>\CIMRepository-3_0_0\bin
repository.bat
```

To start the repository on UNIX, enter the following:

```
cd <install dir>/CIMRepository-3_0_0/bin
./repository.sh
```

## Uninstalling Adapter for SAP R/3 3.9

A separate uninstaller is provided to remove Adapter for SAP R/3 version 3.9. The scripts to start the uninstaller are located in `<install dir>\SAP-3_9`.

- For Windows, `uninstall.bat`
- For Unix, `uninstall.sh`

❖ **To uninstall Adapter for SAP R/3 version 3.9:**

- 1 Move any custom or other files that you want to save from the `SAP-3_9` directory to another directory.
- 2 At the command prompt, enter the following:

- a For Windows:

```
cd <install dir>\SAP-3_9
uninstall.bat
```

- b For Unix:

```
cd <install dir>/SAP-3_9
uninstall.sh
```

The InstallShieldWizard starts to uninstall Adapter for SAP R/3 version 3.9.

- 3 Follow the wizard until uninstall is complete.
- 4 Manually remove the remaining `<install dir>\SAP-3_9` directory.

## Uninstalling Shared Components

You must first uninstall Adapter for SAP R/3 version 3.9 and any other New Era of Networks or Sybase products that use these shared components. You will receive a message when you attempt to uninstall any component that is required by another product. Shared components must be uninstalled in the order they are listed in step 4.

❖ **To uninstall shared components:**

- 1 Copy `<install dir>\JRE_1_3` directory to a temporary location and change the `PATH` environment variable to include the temporary directory.

This provides a correct version of the JRE for running the uninstallers.

---

**Note**

If you do not copy JRE\_1\_3 to a temporary location, you will not be able to uninstall all of the shared components.

---

- 2 To verify that Java version 1.3.1 or higher is being used, enter the following:

```
java -version
```

- 3 Enter the following command:

```
cd <install dir>\uninstallers
```

- 4 Repeat the steps 5 through 9 for each shared product in the following order:

- AgentManager-3\_0\_0
- ConfigUtils
- jConnect
- ThirdParty
- JRE\_1\_3
- ASAAgent
- CIMRepository-3\_0\_0
- EPASA-7\_0\_3

- 5 Run the following command. Note that the command is written for Windows. For Unix, substitute a forward slash for the backward slash:

```
java -jar <Shared Product>\<Shared Product File>.jar
```

For example:

```
java -jar AgentManager-3_0_0\AgentManager-3_0_0.jar
```

The InstallShieldWizard starts to uninstall the shared component.

- 6 To begin the installation, click *Next* on the initial Uninstaller window. The Repository Information window appears.
- 7 Accept the defaults for the Repository Connection Information and click *Next*.

- 8 On the Feature Select window, select all items to be removed and click Next.
- 9 When the selected components are uninstalled, click *Finish*.
- 10 After repeating steps 5 through 9 for all of the shared products, delete the copy of JRE\_1\_3 that you had moved to a temporary directory.
- 11 Manually remove the remaining *<install dir>* directory.

---

# Index

## B

book organization v

## C

changes to configuration keys 3

CIM Repository 25, 30

compilers

HP aC++ 20

Microsoft Visual C++ 20

SparcWorks C++ 20

VisualAge C++ 20

configuration key changes 3

conventions vii

conversion tool configuration file 12

converting IDoc formats 5

## D

database

existing 2

target 2

databases

DB2 UDB 20

Microsoft SQL Server 20

Sybase ASE 20

default directory 26

documentation set v

## E

e-Biz Integrator 18

EMQ 18

## F

Flat File 18

formats

IDoc 5

## I

IDocs

converting format 5

integration servers

e-Biz Integrator 18

MQSeries 18

MQSI 2.1 18

## L

log file

example 11

## M

migration 1

MQSeries Integrator 18

MQSI 2.0.2 18

MSMQ 18

## N

NCF Serializer 18

NNT56 Schema Loader 18

## O

operating systems

AIX 20

HP-UX 20

Solaris 20

Windows NT 20

---

## R

repository running 27, 29

## S

SAP

installing 27

uninstalling 34, 35

## T

temporary directory 26

transport

supported 18

typographical conventions vii

## U

uninstall

SAP 3.8 33

SAP 3.9 33

shared components 35

upgrading 1

BAPI formats 14

from 3.0.3 2

from 3.8 3

rules 15

## W

WebSphere MQ Integrator 18

## X

XML Serializer 18